



企业简介

Company profile

镇江中船现代发电设备有限公司（CMXD）成立于2005年，隶属于中国船舶工业集团公司（CSSC），是集发电机研发、制造及发电机组成套为一体的现代化企业。公司主要产品包括低压发电机、中高压发电机、高速柴油发电机组等，同时也具备研发和制造轴带发电机、汽轮发电机的能力。其产品广泛应用于船舶、海洋工程、电站，同时也广泛应用于核电、陆用电站、楼宇、医院等领域。

Zhenjiang China Marine-XianDai Generating Co., Ltd.(CMXD), founded in 2005, subordinated to China State Shipbuilding Corporation (CSSC), is a high-tech company specializing in producing, researching and developing generators and diesel gensets. Main products are low voltage generators, middle and high voltage generators, high speed gensets and so on. CMXD also has the ability to research and develop & produce shaft generator and steam-turbine generator. Our products are widely used on ship, marine engineering, power station and nuclear power plant, land power station, building, hospital and other industrial applications.

在现有韩国现代三相无刷同步发电机许可证技术的基础上，公司于2016年成功引进了德国西门子公司1DB系列三相无刷同步高低压发电机许可证技术，实现共线生产，以满足客户的不同需求。公司将秉承西门子发电机全球领先的技术基础，结合公司现有的发电机生产线和测试系统，持续为客户提供安全可靠、性能稳定、品质优异的发电机产品，满足客户的不同应用环境和工况要求。

Based on the Korea HYUNDAI three-phase brushless synchronous generator license, CMXD introduced 1DB series three-phase brushless synchronous generator technology from SIEMENS in 2016. And now CMXD can produce the generators using above two technologies to meet the different requirements from customers. CMXD will follow the world's leading technology of SIEMENS generator, combined with our existing production line and test system, continues to provide safe, reliable, stable performance and high quality generators to customers, and can satisfy different environment and working conditions.

CMS系列发电机介绍

CMS series generator profile

概况

General description

CMS系列发电机是基于西门子1DB许可证技术生产的。西门子同步发电机已在全世界普遍使用。所有低压和高压发电机结构紧凑、性能卓越、应用范围宽广。西门子发电机有宽广的型谱范围，能为客户提供适应特殊场合应用的最佳解决方案。精益求精的设计符合DIN-EN 60034、VDE 0530、IEC 34-1等国际标准以及ABS、BV、CCS、DNV-GL、LRS等船级社规范。西门子发电机既能用柴油机、气体机、多燃料内燃机驱动，也可用水轮机、汽轮机驱动。西门子发电机以运行可靠著称，即使在严酷的环境下。

CMS generators are produced based on the SIEMENS 1DB license. Synchronous generators from SIEMENS have been used all over the world. Low and high voltage synchronous generators are robust and compact products in wide applications. The variety of types enables our customers to find the most suitable solution for their particular applications. Our generators are deliberately designed in order to meet various international standards such as DIN-EN 60034, VDE 0530, IEC 34-1 as well as special regulations for classification of the ships and offshore installations, for example, ABS, BV, CCS, DNV-GL, LRS and so on. SIEMENS generators can be driven by combustion engines, gas engines, multi-fuel engines and water turbines, steam turbines as well. SIEMENS generators are always reliable even under severe conditions.

CMS发电机拥有一个宽广的产品系列型谱，其功率和转速范围允许客户选择最合适的发电机作为最佳的选择。根据许可证协议，中船现代和西门子可以根据客户需要对指定电压和极数进行联合延伸设计，属于许可证协议范围内。结构支撑（机座、轴承座）为焊接件，适应不同的连接尺寸。主转子为隐极设计，采用无刷励磁方式，通过旋转整流器为转子绕组提供励磁电流。标准AVR（自动电压调节器）配置于发电机内的辅助出线盒内，由安装在定子槽内的辅助绕组供电。定子绕组具有电气强度和机械强度高、环境适应能力强的特点，绝缘等级为F级或H级。发电机通常都安装温度传感器来控制和保护重要部件。

CMS generators have a wide manufacturing spectrum. The wide range of the power and speed allows customers to choose the most appropriate generator. According to the license agreement, CMXD and SIEMENS can joint and extend the design of the generator with specify voltage and poles upon to customer requirement, fall within the scope of the license agreement. Supporting structure (frame, bearing shields) is welded and allows a broad variability of connection dimensions. Main rotor is based on cylindrical design and is supplied from a rotating exciter. Rotor winding is supplied through a rotating rectifier. Standard location of an automatic electronic voltage regulator (AVR) is in auxiliary terminal box mounted on generator. AVR is supplied from an auxiliary winding installed in stator slots. Stator winding is characterized by a high electrical, mechanical and climatic resistance. The stator winding is manufactured according to insulation class F or class H. Generators are conventionally equipped with temperature sensors in order to control the functions of all important parts of machines.

基本参数

Basic parameters

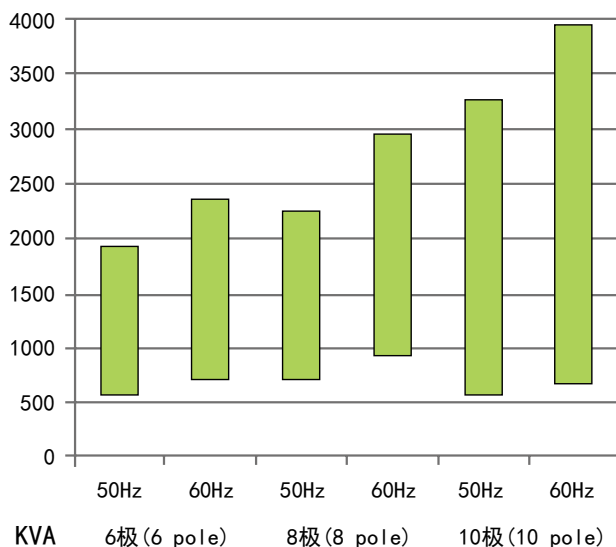
型号/Type	CMS系列/CMS series
输出容量/Power output	600 – 4000 kVA
极数/Pole number	6P – 10P
电压范围/Voltage	0.4 kV – 11 kV
安装形式/Mounting form	IM1001, IM1101, IM1305
轴中心高度/Height of axis	450 mm – 710 mm
效率/Efficiency	93%– 97%
防护等级/Protection	IP23, IP44, IP54
绝缘等级/Insulation class	标准/Standard: 155°C (F); 可选/ Option: 180°C (H)
冷却方式/Cooling	IC01 (空冷/air cooling) , IC81W(水冷/water cooling)
转子类型/Rotor	隐极/cylindrical rotor

功率范围

Power range

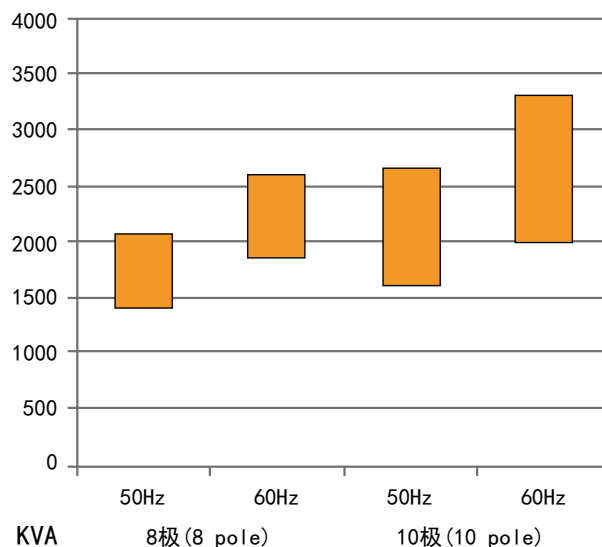
低压型电压范围 (400 – 690V)

Low voltage (400 – 690V)



高压型电压范围 (6300 – 6600V)

High voltage (6300 – 6600V)



设计说明

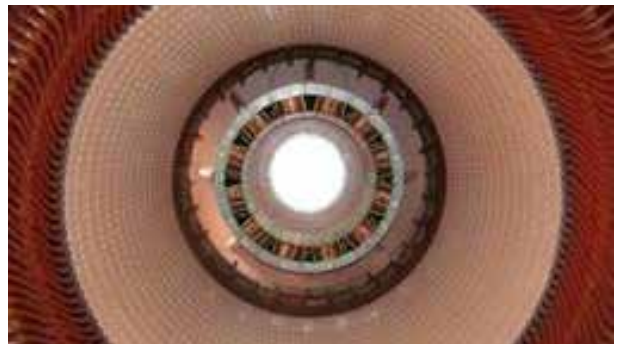
Design

定子

Stator

定子铁芯，采用分段结构，由高性能硅钢叠片构成，硅钢片表面涂有绝缘漆膜，经过轴向冲片叠压和扣片固定后焊接在一起，最后压入结构牢固的焊接机座内。三相绕组和提供励磁电流用的辅助绕组镶嵌在定子铁芯槽内。因卓越的绕组绝缘结构，发电机也适合安装在极端潮湿的地方。

The stator core is built into a rugged welded housing; it is axially compressed and held together by clamping elements on the back of the core. The stator core consists of high-grade electric sheet steel laminations, insulated from each other by a varnish coat. Stator cores are constructed in segments and welded together. The three - phase winding and auxiliary winding for supplying the excitation current are accommodated in the slots of the stator core. Thanks to the excellent winding insulation, the generators are also suitable for installation in areas with extremely high humidity.



过载

Overload

电机的鲁棒性设计允许一定的电气过载负荷。发电机定子能够承受150%额定电流持续2分钟不会给绕组带来任何损害。

Robust design of machines allows a certain electrical overload. Without any damage to winding, generators can be overloaded by stator current up to 150% of nominal current value up to 2 minutes.

短路持续电流

Constant short-circuit current

为保护装置功能正常，发电机能提供一个短路电流，其值是额定电流的3倍。这个电流至少能持续3秒后必须由保护系统断开。

To ensure a correct function of protection devices, generator is able to supply a short-circuit current, the value of which is triple of nominal current. This current must be disconnected by the means of a protective system within 3 seconds at the latest.

结构（设计）类型

Design types

根据客户的要求进行IM1101 (B20)、IM1001(B3)、IM1305(B16)以及其它结构形式设计（含盘片形式），可制造成单轴承和双轴承两种类型。轴伸高度和连接尺寸可在设计允许范围内调整。

Generators CMS are manufactured as two-bearing or single-bearing types, designed according to IM1101 (B20)、IM1001(B3)、IM1305(B16), respectively other designs (including disc) requested by customers. Axial height and connection dimensions are variable in range of design possibilities.

轴承

Bearings

发电机既可选装可加注更换润滑脂的滚动轴承，也可选常规滑动轴承、绝缘轴承及其附件。

Generators can be equipped either with rolled bearings, which include the possibility of re-lubrication and removing of waste grease or with sleeve bearings or insulated bearing including their accessories.

防护等级与冷却

Protection degree and cooling

CMS发电机的基本型是依据IP44 (IP54) 和IP23进行设计。防护等级为IP23时，采用IC01空气冷却方式。如果防护等级为IP44 (54) ，采用IC81W水冷却方式，冷却单元需置于电机上部。对于船用IP44 (54) 水冷却发电机，应急模式 (IP21) 为可选。如果有环境条件要求，发电机开放式空气冷却可以增加空气过滤器。

Basic types of generators are designed according to IP44 (IP54) and IP23. CMS generators can be delivered with IC01 cooling using the surrounding air from the local environment with protection IP23. In case of water cooling (IC81W) with protection degree IP44 (54) the cooling elements are located on top of the machine. For ship-operated water-cooled generator, emergency mode (IP21) is optionally provided. If the ambient conditions require it, generators using open-circuit air cooling can be fitted with air-intake filters.

出线盒

Terminal boxes

高压主绕组连接线和用于调节和保护装置的连接线相互独立的。出线盒根据客户要求制造。

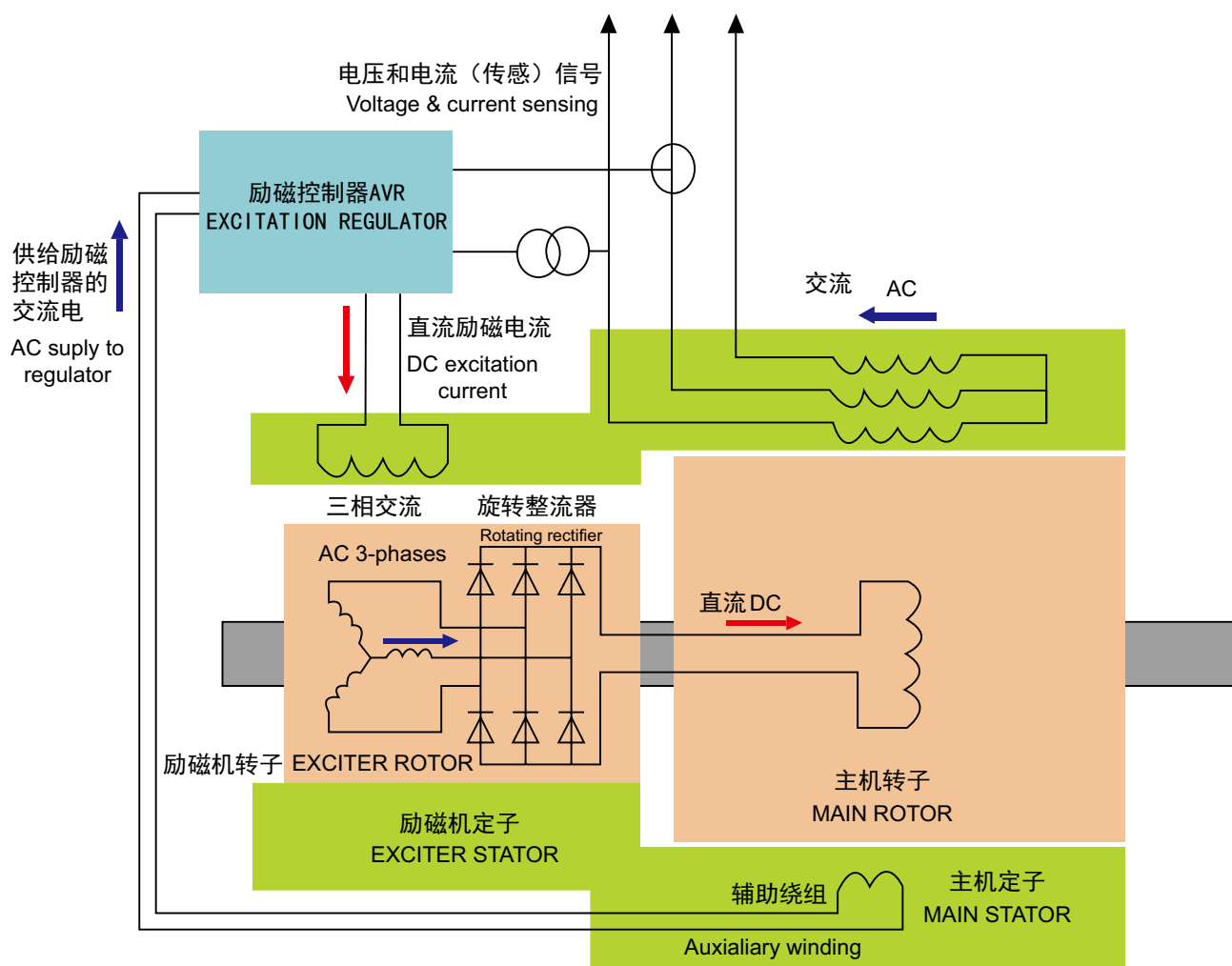
Connection of main high-voltage winding and connections used for regulation and protection devices are always separated from each other. The terminals are manufactured according to customer's request.

励磁系统

Excitation system

无刷自励系统是西门子发电机的标准配置。励磁系统由辅助绕组、AVR、用于电流和电压信号的CTs和VTs、内置励磁机和旋转整流器组成。特别是配置了用于自动电压调节的数字AVR，能更好地应对发电机并网运行时的电压跌落。

Generators are equipped with a brushless self-excitation system as standard. The excitation system consists of the auxiliary windings, automatic voltage regulator (AVR), CTs and VTs for the current and voltage sensing, built-in exciter and the rotating rectifier. Typically, generators are equipped with a digital AVR for automatic voltage regulation with voltage drip function for parallel operation.



降功率系数

De-rating factors

海拔高度

Altitude

额定功率是指发电机安装在海拔1000米以下，如果超过这个高度，需按下面给出的降额系数使用。

The rated power outputs refer to installation up to 1000 masl. Above this level the following de-rating factors have to be applied.

高度 (海拔/米) Altitude (masl)	1000	2000	3000	4000
降额系数 De-rating factor	1	0.96	0.93	0.88

功率因数

Power factor

发电机额定功率因数为0.8。根据不同的功率因数，对应的降额系数如下：

The nominal power factor is 0.8. For different p.f. values following de-rating factors have to be applied.

功率因数 Power factor	0.8	0.7	0.6	0.5	0.4	0.0
降额系数 De-rating factor	1	0.95	0.92	0.88	0.86	0.82

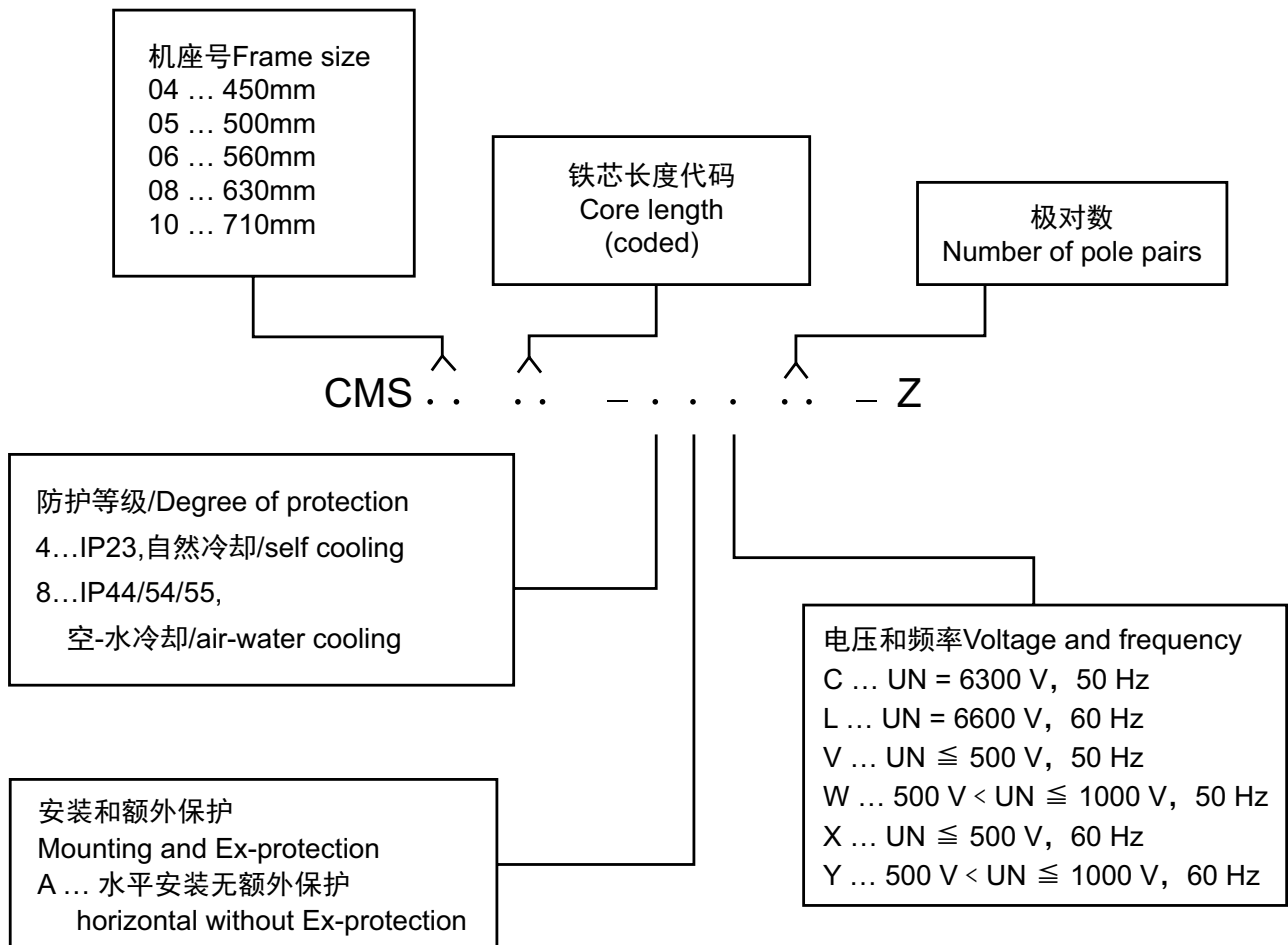
电压等级与极数

Available Voltage levels

型号/Type	6极 (6p)	8极 (8p)	10极 (10p)
400V / 50Hz	●/●	●/●	●/●
450V / 60Hz	●/●	●/●	●/●
690V / 50Hz	●/●	●/●	●/●
690V / 60Hz	●/●	●/●	●/●
6300V / 50 Hz	●/●	●/●	●/●
6600V / 60 Hz	●/●	●/●	●/●

发电机型号定义

Type code definition



选型表

Types of generators

型号 Type	极数 No. of poles	额定容量 Output[kVA]			额定电压 Voltage [V]	额定频率 fn [Hz]	额定转速 Speed [r/min]
		冷却空气温度 Cooling air temp					
		40 °C	45 °C	50 °C(45 °C LRS)			
6Poles – 400V/50Hz							
CMS0623-*AV03-Z	6	1022	984	940	400	50	1000
CMS0420-*AV03-Z	6	545	525	501	400	50	1000
CMS0422-*AV03-Z	6	620	597	570	400	50	1000
CMS0425-*AV03-Z	6	696	670	640	400	50	1000
CMS0521-*AV03-Z	6	743	716	684	400	50	1000
CMS0522-*AV03-Z	6	827	796	761	400	50	1000
CMS0526-*AV03-Z	6	968	932	891	400	50	1000
CMS0627-*AV03-Z	6	1410	1358	1297	400	50	1000
CMS0631-*AV03-Z	6	1622	1562	1492	400	50	1000
CMS0635-*AV03-Z	6	1927	1856	1773	400	50	1000
6Poles – 450V/60Hz							
CMS0420-*AX03-Z	6	682	657	627	450	60	1200
CMS0422-*AX03-Z	6	771	742	709	450	60	1200
CMS0521-*AX03-Z	6	917	883	844	450	60	1200
CMS0522-*AX03-Z	6	1034	996	951	450	60	1200
CMS0626-*AX03-Z	6	1669	1607	1535	450	60	1200
CMS0631-*AX03-Z	6	1974	1901	1816	450	60	1200
CMS0633-*AX03-Z	6	2303	2218	2119	450	60	1200
CMS0622-*AX03-Z	6	1457	1403	1340	450	60	1200
CMS0526-*AX03-Z	6	865	833	796	450	60	1200
CMS0623-*AX03-Z	6	1199	1154	1103	450	60	1200

空冷：*用4表示/Cooling IC01：* stands for 4

水冷：*用8表示/Cooling IC81W：* stands for 8

选型表

Types of generators

型号 Type	极数 No. of poles	额定容量 Output[kVA]			额定电压 Voltage [V]	额定频率 fn [Hz]	额定转速 Speed [r/min]
		冷却空气温度 Cooling air temp					
		40 °C	45 °C	50 °C(45 °C LRS)			
8Poles – 400V/50Hz							
CMS0522-*AV04-Z	8	696	670	640	400	50	750
CMS0524-*AV04-Z	8	780	751	718	400	50	750
CMS0527-*AV04-Z	8	884	851	813	400	50	750
CMS0531-*AV04-Z	8	1034	996	951	400	50	750
CMS0630-*AV04-Z	8	1222	1177	1124	400	50	750
CMS0635-*AV04-Z	8	1387	1336	1276	400	50	750
CMS0826-*AV04-Z	8	1575	1517	1449	400	50	750
CMS0832-*AV04-Z	8	1880	1810	1730	400	50	750
8Poles – 450V/60Hz							
CMS0522-*AX04-Z	8	879	846	809	450	60	900
CMS0524-*AX04-Z	8	987	950	908	450	60	900
CMS0527-*AX04-Z	8	1109	1068	1020	450	60	900
CMS0630-*AX04-Z	8	1504	1448	1384	450	60	900
CMS0826-*AX04-Z	8	1974	1901	1816	450	60	900
CMS0531-*AX04-Z	8	1297	1249	1193	450	60	900
CMS0635-*AX04-Z	8	1739	1675	1600	450	60	900
CMS0830-*AX04-Z	8	2280	2195	2097	450	60	900
CMS0531-*AX04-Z	8	1297	1249	1193	450	60	900
CMS0635-*AX04-Z	8	1739	1675	1600	450	60	900
CMS0830-*AX04-Z	8	2280	2195	2097	450	60	900

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		冷却空气温度 Cooling air temp					
		40 °C	45 °C	50 °C(45 °C LRS)			
10Poles – 400V/50Hz							
CMS0522-*AV05-Z	10	526	507	484	400	50	600
CMS0523-*AV05-Z	10	573	552	527	400	50	600
CMS0525-*AV05-Z	10	635	612	584	400	50	600
CMS0527-*AV05-Z	10	682	657	627	400	50	600
CMS0529-*AV05-Z	10	766	738	705	400	50	600
CMS0627-*AV05-Z	10	902	869	830	400	50	600
CMS0630-*AV05-Z	10	1015	977	934	400	50	600
CMS0634-*AV05-Z	10	1166	1123	1073	400	50	600
CMS0825-*AV05-Z	10	1199	1155	1103	400	50	600
CMS0829-*AV05-Z	10	1434	1381	1319	400	50	600
CMS0835-*AV05-Z	10	1716	1653	1579	400	50	600
CMS1025-*AV05-Z	10	1833	1765	1686	400	50	600
CMS1030-*AV05-Z	10	2209	2127	2032	400	50	600
CMS1036-*AV05-Z	10	2327	2241	2141	400	50	600
10Poles – 450V/60Hz							
CMS0523-*AX05-Z	10	714	688	657	450	60	720
CMS0525-*AX05-Z	10	790	761	727	450	60	720
CMS0527-*AX05-Z	10	865	833	796	450	60	720
CMS0627-*AX05-Z	10	1128	1086	1038	450	60	720
CMS0630-*AX05-Z	10	1269	1222	1167	450	60	720
CMS0825-*AX05-Z	10	1481	1426	1363	450	60	720
CMS0829-*AX05-Z	10	1786	1720	1643	450	60	720
CMS1025-*AX05-Z	10	2350	2263	2162	450	60	720
CMS0522-*AX05-Z	10	658	634	605	450	60	720
CMS0627-*AX05-Z	10	959	923	882	450	60	720
CMS0634-*AX05-Z	10	1457	1403	1340	450	60	720
CMS0835-*AX05-Z	10	2115	2037	1946	450	60	720
CMS1030-*AX05-Z	10	2792	2689	2568	450	60	720
CMS1036-*AX05-Z	10	3079	2965	2832	450	60	720
CMS0627-*AX05-Z	10	959	923	882	450	60	720
CMS0634-*AX05-Z	10	1457	1403	1340	450	60	720
CMS0835-*AX05-Z	10	2115	2037	1946	450	60	720
CMS1030-*AX05-Z	10	2792	2689	2568	450	60	720
CMS1036-*AX05-Z	10	3079	2965	2832	450	60	720

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Types of generators

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		冷却空气温度 Cooling air temp					
		40 °C	45 °C	50 °C(45 °C LRS)			
6Poles – 690V/50Hz							
CMS0420-*AW03-Z	6	545	525	501	690	50	1000
CMS0422-*AW03-Z	6	620	597	570	690	50	1000
CMS0425-*AW03-Z	6	696	670	640	690	50	1000
CMS0521-*AW03-Z	6	743	716	684	690	50	1000
CMS0522-*AW03-Z	6	827	796	761	690	50	1000
CMS0526-*AW03-Z	6	987	950	908	690	50	1000
CMS0622-*AW03-Z	6	1105	1064	1017	690	50	1000
CMS0625-*AW03-Z	6	1222	1177	1124	690	50	1000
CMS0627-*AW03-Z	6	1410	1358	1297	690	50	1000
CMS0633-*AW03-Z	6	1810	1743	1665	690	50	1000
6Poles – 690V/60Hz							
CMS0420-*AY03-Z	6	682	657	627	690	60	1200
CMS0422-*AY03-Z	6	771	742	709	690	60	1200
CMS0425-*AY03-Z	6	865	833	796	690	60	1200
CMS0521-*AY03-Z	6	940	905	865	690	60	1200
CMS0522-*AY03-Z	6	1034	996	951	690	60	1200
CMS0526-*AY03-Z	6	1222	1177	1124	690	60	1200
CMS0622-*AY03-Z	6	1410	1358	1297	690	60	1200
CMS0626-*AY03-Z	6	1716	1653	1579	690	60	1200
CMS0631-*AY03-Z	6	2068	1991	1903	690	60	1200
CMS0633-*AY03-Z	6	2209	2127	2032	690	60	1200

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		冷却空气温度 Cooling air temp					
		40 °C	45 °C	50 °C(45 °C LRS)			
8Poles – 690V/50Hz							
CMS0522-*AW04-Z	8	696	670	640	690	50	750
CMS0524-*AW04-Z	8	780	751	718	690	50	750
CMS0527-*AW04-Z	8	884	851	813	690	50	750
CMS0531-*AW04-Z	8	987	950	908	690	50	750
CMS0630-*AW04-Z	8	1222	1177	1124	690	50	750
CMS0635-*AW04-Z	8	1363	1313	1254	690	50	750
CMS0826-*AW04-Z	8	1551	1494	1427	690	50	750
CMS0830-*AW04-Z	8	1833	1765	1686	690	50	750
CMS0835-*AW04-Z	8	2115	2037	1946	690	50	750
8Poles – 690V/60Hz							
CMS0832-*AY04-Z	8	2562	2467	2357	690	60	900
CMS0835-*AY04-Z	8	2773	2670	2551	690	60	900
CMS0522-*AY04-Z	8	879	846	809	690	60	900
CMS0524-*AY04-Z	8	987	950	908	690	60	900
CMS0527-*AY04-Z	8	1109	1068	1020	690	60	900
CMS0531-*AY04-Z	8	1297	1249	1193	690	60	900
CMS0630-*AY04-Z	8	1457	1403	1340	690	60	900
CMS0635-*AY04-Z	8	1763	1698	1622	690	60	900
CMS0826-*AY04-Z	8	1974	1901	1816	690	60	900
CMS0830-*AY04-Z	8	2303	2218	2119	690	60	900
CMS0832-*AY04-Z	8	2562	2467	2357	690	60	900
CMS0835-*AY04-Z	8	2773	2670	2551	690	60	900

空冷：*用4表示/Cooling IC01：* stands for 4

水冷：*用8表示/Cooling IC81W：* stands for 8

选型表

Types of generators

型号 Type	极数 No. of poles	额定容量 Output[kVA]			额定电压 Voltage [V]	额定频率 fn [Hz]	额定转速 Speed [r/min]
		冷却空气温度 Cooling air temp					
		40 °C	45 °C	50 °C(45 °C LRS)			
10Poles – 690V/50Hz							
CMS0522-*AW05-Z	10	526	507	484	690	50	600
CMS0523-*AW05-Z	10	573	552	527	690	50	600
CMS0525-*AW05-Z	10	620	597	570	690	50	600
CMS0527-*AW05-Z	10	672	647	618	690	50	600
CMS0529-*AW05-Z	10	761	733	700	690	50	600
CMS0627-*AW05-Z	10	902	869	830	690	50	600
CMS0630-*AW05-Z	10	1015	977	934	690	50	600
CMS0634-*AW05-Z	10	1156	1113	1064	690	50	600
CMS0826-*AW05-Z	10	1222	1177	1124	690	50	600
CMS0828-*AW05-Z	10	1363	1313	1254	690	50	600
CMS0830-*AW05-Z	10	1457	1403	1340	690	50	600
CMS0834-*AW05-Z	10	1645	1584	1513	690	50	600
CMS1025-*AW05-Z	10	1833	1765	1686	690	50	600
CMS1030-*AW05-Z	10	2209	2127	2032	690	50	600
CMS1036-*AW05-Z	10	2468	2377	2271	690	50	600
CMS1040-*AW05-Z	10	3055	2942	2811	690	50	600
10Poles – 690V/60Hz							
CMS1040-*AY05-Z	10	3713	3576	3416	690	60	720
CMS0522-*AY05-Z	10	672	647	618	690	60	720
CMS0523-*AY05-Z	10	724	697	666	690	60	720
CMS0525-*AY05-Z	10	794	765	730	690	60	600
CMS0527-*AY05-Z	10	865	833	796	690	60	720
CMS0529-*AY05-Z	10	968	932	891	690	60	720
CMS0627-*AY05-Z	10	1137	1095	1046	690	60	720
CMS0630-*AY05-Z	10	1250	1204	1150	690	60	720
CMS0634-*AY05-Z	10	1481	1426	1363	690	60	720
CMS0827-*AY05-Z	10	1645	1584	1513	690	60	720
CMS0830-*AY05-Z	10	1833	1765	1686	690	60	720
CMS0835-*AY05-Z	10	2162	2082	1989	690	60	720
CMS1025-*AY05-Z	10	2327	2241	2141	690	60	720
CMS1030-*AY05-Z	10	2844	2739	2616	690	60	720
CMS1036-*AY05-Z	10	3384	3259	3113	690	60	720

空冷：*用4表示/Cooling IC01：* stands for 4

水冷：*用8表示/Cooling IC81W：* stands for 8

选型表

Types of generators

型号 Type	极数 No. of poles	额定容量 Output[kVA]			额定电压 Voltage [V]	额定频率 fn [Hz]	额定转速 Speed [r/min]
		冷却空气温度 Cooling air temp					
		40 °C	45 °C	50 °C(45 °C LRS)			

8 Poles、10Poles – 6300V/50Hz

CMS1025-*AC05-Z	10	1528	1471	1406	6300	50	600
CMS1030-*AC05-Z	10	1833	1765	1686	6300	50	600
CMS1036-*AC05-Z	10	2233	2150	2054	6300	50	600
CMS1040-*AC05-Z	10	2468	2377	2271	6300	50	600
CMS0826-*AC04-Z	8	1363	1313	1254	6300	50	750
CMS0830-*AC04-Z	8	1622	1562	1492	6300	50	750
CMS0832-*AC04-Z	8	1716	1652	1579	6300	50	750
CMS0835-*AC04-Z	8	1951	1879	1795	6300	50	750

8 Poles、10Poles – 6600V/60Hz

CMS1025-*AL05-Z	10	1880	1810	1730	6600	60	720
CMS1030-*AL05-Z	10	2303	2218	2119	6600	60	720
CMS1036-*AL05-Z	10	2820	2716	2594	6600	60	720
CMS1043-*AL05-Z	10	3102	2987	2854	6600	60	720
CMS0826-*AL04-Z	8	1810	1743	1665	6600	60	900
CMS0830-*AL04-Z	8	1951	1879	1795	6600	60	900
CMS0832-*AL04-Z	8	2209	2127	2032	6600	60	900
CMS0835-*AL04-Z	8	2444	2354	2248	6600	60	900

空冷：*用4表示/Cooling IC01：* stands for 4

水冷：*用8表示/Cooling IC81W：* stands for 8